Notebook Series -- Notebooks by Edison and Other Experimenters
Disc Plating Experiments
Notebook, N-20-06-08.1

This notebook was used during June-July 1920 and January-March 1921 by Edison, Walter N. Archer, Paul B. Kasakove, and W. J. Taylor. The entries pertain to the plating processes involved in the manufacture of disc records. The early entries by Edison contain data on various plating baths. Following these entries are tabular reports by Archer and Taylor of various plating baths and various molds plated in "Bath 5" in June and July 1920. Notes, suggestions, and instructions by Edison are interspersed throughout the early tables. The second half of the book contains entries from January-March 1921 for experiments, numbered 1-59, on speeding up the plating process. These experiments resulted in the adoption of a fast nickel plating process that reduced plating time. At the end of the book are several pages of tabular forms without data (not selected). The front cover is labeled "5" and is marked "Nickel Fast Plating Processe Experiments." The pages are unnumbered, and several pages have been removed from the book. Approximately 135 pages have been used.

5 Bath -

June 8th - 2nd Disc in

	SG	Volt	Amp	Temp
1.20 pm June 8	1175	9.5	23	83
2-20	1175	9.5	21	84
3-20	1175	9.5	21	83
4-20	1175	9.5	21	80
5-20	1175	9.5	21	82
6.20	1175	9.5	20	81
7-20	1175	9.5	20	82
8.20	1175	9.5	20½	82
9.20	1180	9.5	21	82
10.20	1180	9.5	21	82
11.20	1170	9.5	21½	80
12:20	1170	9.5	22	81
June 9				
1.20 AM	1170	9.5	22½	83
2.20	1170	9.5	22½	83
3.20	1170	9.5	22	83
4.20	1170	9.5	22	81
5.20	1170	9.5	22	81
6.20	1170	9.5	22	82
7.20	1170	9.5	22	81
8.20	1170	9.5	21	83
9.20	1170	9.5	20	80
10-20	1175	9-5	20	80
11.20	1175	9-5	20	80
12.20 PM June 9	1170	9.5	20½	81
1-20	1170	9-5	20	81

No 5 2nd Disc

Cathodes 066

41 hours

21 Amp Per hour

Out June 10 - 6.20 AM

5 Bath
June 9

		SG	Volts	Amps	Temp
2.20		1170	9½	20	80
3.20		1170	9½	20	80
4.20	566 amp	1170	9½	20	82
5.20		1170	9½	20	83
6.20		1170	9½	20	83
7.20		1170	9½	19	81
8.20		1170	9½	18½	80
9.20		1170	9½	18½	80
10.20	33 hour	1170	9½	18	80
11.20		1170	9½	19	80
12.20		1170	9½	20	82
1.20	AM June 10	1170	9½	20	82
2.20		1170	9½	20	80
3.20		1170	9½	20	82
4.20		1170	9½	20	82
5.20		1170	9½	20	83
6.20	Out	1170	9½	20	83

5 Bath

3 lbs Zinc in

June 10 AM	S.G.	Volts	Amp	Temp	
10.00	1175	9-5	20	81	
11-00	1175	9-5	20	81	
12-00	1175	9 5	21	82	
1-00	1175	9-5	21	81	
2.00	1175	9.5	20	82	
3.00	1175	9.5	19	81	
4.00	1175	9.5	18	80	
5.00	1175	9-5	18	81	137
6.00	1175	9-5	18	81	
7.00	1175	9.5	19	80	
8.00	1175	9.5	19	80	
9.00	1175	9.5	19	80	
10.00	1170	9.5	18	80	1/93
11.00	1170	9.5	18	80	
12.00	1170	9.5	18	81	
1.00 PM June 11	1170	9.5	18	80	
2.00	1170	9.5	18	81	72
3.00	1170	9.5	17 3/4	80	
4.00	1170	9.5	17	80	
5.00	1170	9.5	17	80	
6.00	1170	9.5	17	82	
7.00	1170	9.5	17	80	85 3/4
8.00	1170	9.5	18	80	
9.00	1170	9.5	15	80	
10.00	1170	9.5	15	81	
11.00	1170	9.5	15	82	
12.00	1170	9.5	16	82	79

Nº 5. Bath

3rd Disc. out

start June 10 - 10 AM

876 Amp in 51½ hours

Out at June 12 - 1:30 PM at 17 Amp Per hour

June 11	Spec	5 volts	Bath amp	Temp	3rd Disc
AM					
1.00	1170	9½	15	80	
2.00	1170	9½	15	81	
3.00	1170	9½	15	80	
4.00	1170	9½	15	80	
5.00	1170	9½	15	83	
6.00	1170	9½	15	82	
7.00	1170	9½	15	83	105 V
8.00	1170	9½	15	83	
9.00	1170	9½	14	83	
10.00	1170	9½	14	82	Back chamber running over
11.00	1170	9½	16	80	59
12.00	1170	9½	15	80	
June 12					
1.00	1170	9½	16	80	
2.00	1170	9½	17	80	
3.00	1170	9½	17	80	
4.00	1170	9½	16	81	
5.00	1170	9½	16	80	
6.00	1170	9½	16	80	
7.00	1170	9½	17	80	
8.00	1170	9½	16	81	
9.00	1170	9½	16	83	162 V
10.00	1170	9½	16	83	
11.00	1170	9½	15	83	
12.00	1170	9½	16	83	
1.00	1170	9½	15	83	
2.00	1170	9½	15	83	Out 76

Found no remarks any where calling to attention to slate of anode as shown by amperes being low until anode dropped off

Note amp - anode by night didnt hold up 2 disc as it gave less amp

Anode NG -

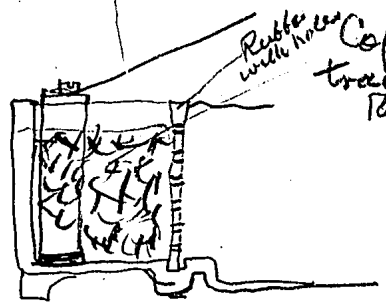
Avoid rate from support bar 2-30 P.M not plating

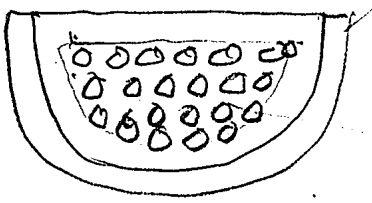
No 5 Bath 4th Disc in

time 12 PM	Sls	Volts	Amp	Temp	Total amp
3.00	1170	9½	16	83	16
4.00	1170	9-½	15	82	31
5.00	1170	9½	15	80	46
6.00	1170	9½	14	82	60
7.00	1170	9½	14	83	74
8.00	1170	9½	13	83	87
9.00	1170	9½	13	83	100
10.00	1170	9½	14	83	114
11.00	1170	9½	13	81	127
12.00	1170	9.5	14	85	141
1.00	1170	9-5	14	84	155
2.00	1170	9-5	13	84	168
3.00	1170	9-5	12½	82	181
4.00	1170	9-5	13	82	194
5.00	1170	9.5	13	82	107
6.00	1170	9.5	12	82	119
7.00	1170	9.5	12	81	131
8.00	1170	9.5	10	84	141
9.00	1170	9.5	10	82	151
10.00	1170	9.5	10	82	161
11.00	1170	9.5	10	82	171
12.00	1175	9.5	10	81	181
1.00	1175	9-5	10	81	191
2.00	1175	9-5	10	81	[illegible]
3.00	1175	9.5	5	82	[illegible]

Note amperes, Resistance is in lack of more holes.
Will make a new rubber Monday with more area of holes?

stopped for 15 minutes belt broke
Marked across at 12:00 June 13th M
the face





June 13	SPG	Volts	amp	Temp	Total amp
6 pm	1175	9-5	19	83	
7:00	1175	9-5	20	83	20
8:00	1175	9-5	20	83	40
9:00	1175	9.5	20	83	60
10:00	1175	9.5	20	80	80
11:00	1175	9-5	21	80	101
12:00	1170	9-5	22	80	123
1:00	1170	9.5	22	80	145
2:00	1170	9.5	22	81	167
3:00	1170	9.5	22	82	189

L Batt. No 5

June 14

AM	S.P.G.	Volts	Amp	Temp	Total
4.00	1170	9.5	22	80	211
5.00	1170	9.5	22	80	233
6.00	1170	9.5	22	82	255
7.00	1170	9.5	22	81	277
8.00	1175	9.5	21	80	298
9.00	1170	9-5	21	83	319
10.00	1170	9-5	21	83	340
11.00	1170	9-5	21	83	361
12.00	1170	9-5	21	83	382
1.00 PM	1175	9-5	21	80	403
2.00	1175	9-5	21	80	424
3.00	1175	9-5	21	80	445
4.00	1175	9-5	21	80	466
5.00	1175	9-5	21	80	487
6.00	1175	9-5	21½	86	508
7.00	1175	9-5	21	83	529
8.00	1175	9-5	21	83	550
9.00	1175	9-5	20	83	570
10.00	1175	9-5	20	82	590
11.00 29	1175	9.5	20	82	610
12.00	1175	9-5	20	80	630
1.00	1175	9-5	20	80	650
2.00	1175	9.5	20	80	670
3.00	1175	9.5	20	80	690
4.00	1175	9.5	20	80	710
5.00	1175	9.5	20	86	730

No 5

June 15 AM	Specific	Volts	Amp	Temp	Total	
5:00	1175	9.5	20	80	750	
7:00	1175	9.5	20	80	770	
8:00	1175	9.5	20	80	790	
9:00	1175	9.5	20	83	810	
10:00	1175	9.5	20	83	830	
11:00	1170	9.5	20	82	850	FIRST
12:00	1170	9.5	20	81	870	Out
1:						42 hours

No 5 2nd in

No 5
Flashed with Nickel

8:00 o'clock June 15 P.M.
added copper precip to Basket
brought amps from 18 to 20

	Sp. Gr	Volts	Amp	Temp	Total Am
JUNE 15 ~~A.M.~~ .00 pm	1170	9½	19	82	
.00	1170	9½	18½	81	18
.00	1170	9-5	18½	81	37
4.00	1170	9-5	18	80	55
5.00	1170	9-5	18	80	73
6.00	1170	9-5	18	80	91
7.00	1170	9-5	18	80	109
8.00	1170	9-5	20	80	129
9.00	1170	9-5	20	83	149
10.00	1170	9-5	20	83	169
11.00	1170	9.5	22	83	191
12.00	1170	9.5	21	80	212
June 16 A.M. 1.00	1170	9.5	20	82	232
2.00	1170	9.5	20	80	252
3.00	1170	9.5	20	80	272
4.00	1170	9.5	20	80	292
5.00	1170	9.5	20	80	312
6.00	1170	9.5	20	80	332
7.00	1170	9.5	20	80	352
8.00	1170	9.5	20	80	372
9.00	1170	9.5	21	83	393
10.00	1170	9.5	21	83	414
1.00	1170	9.5	20	80	434
2.00 PM	1170	9.5	20	80	454
3.00	1170	9.5	19	82	473

No 5 2nd Size Out

June 16

PM	Sec	Volt	Amp	Temp	Total
2.00	1170	9½	20	82	493
3.00	1170	9½	20	82	513
4.00	1170	9½	20	82	533
5.00	1170	9-5	20	82	553
6.00	1170	9-5	20	82	573
7.00	1170	9-5	19	82	592
8.00	1170	9-5	18	82	610
9.00	1170	9-5	18	83	628
10.00	1170	9-5	18	83	646
11.00	1170	9.5	18	80	664
12.00	1170	9.5	18	81	682
June 17 AM					
.00	1170	9.5	19	80	701
.00	1170	9.5	19	80	720
3.00	1170	9.5	19	80	739
.00	1170	9.5	20	80	759
.00	1170	9.5	19	82	778
.00	1170	9.5	19	82	797
.00	1170	9.5	19	81	816
.00	1170	9.5	19	80	835
.00	1170	9-5	19	83	854
.00	1170	9-5	19	83	873 Out

Out June - 17 AM 45 hours

No 5 - 873 Amp in 45 hours
about 19½ Per hour

No 5 Bath 3rd disc
same made

June 17

A.M.	Sec	Volts	Amp	Temp	Total	
10.30	1170	9.5	19	83		
11.30	1175	[illegible]	18½	83	18	
2.00	1175	9.5	18	81	36	Current off
12.30						" on
1.30	1175	9-5	18	81	54	"
2.30	1175	9-5	18	82	72	
3.30	1175	9-5	18	82	90	
4.30	1175	9-5	18	82	108	
5.30	1175	9-5	18	82	126	
6.30	1175	9-5	18	82	144	
7.30	1175	9-5	18	82	162	
8.30	1175	9-5	18	82	180	
9.30	1175	9-5	18	82	198	
10.30	1175	9-5	18	82	216	
11.30	1175	9-5	18	82	234	
12.30	1175	9-5	19	80	253	
June 18						
A.M.						
1.30	1175	9-5	18	80	271	
2.30	1175	9-5	18	80	289	
3.30	1175	9-5	18	82	307	
4.30	1175	9.5	19	80	326	
5.30	1175	9-5	20	80	346	
6.30	1175	9-5	20	80	366	
7.30	1175	9-5	20	82	386	
8.30	1175	9-5	20	83	406	
9.30						

No 5 : B. Disc same basket

June 18

AM	Slow	Volts	Amps	Temp	Total
9.30					
9.30	1175	9-5	20	83	426
10.30	1175	9-5	20	83	446
11.30	1175	9-5	19	83	465
12-30	1175	9-5	19	83	484
PM 1.30	1175	9-5	19	83	503
2.30	1175	9-5	18	83	521
3.30	1175	9-5	18	84	539
4.30	1175	9-5	18	84	557
5.30	1175	9-5	18	83	575
6.30	1175	9-5	18	83	593
7.30	1175	9-5	17	83	610
8.30	1175	9-5	17	83	627
9.30	1175	9-5	17	83	644
10.30	1175	9-5	17	83	661
11.30	1175	9-5	17	80	678
12.30	1175	9-5	18	80	696
June 19					
AM 1.30	1175	9-5	18	80	714
2.30	1175	9-5	17	80	731
3.30	1175	9-5	18	80	749
4.30	1175	9-5	18	80	767
5.30	1175	9-5	18	80	785
6.30	1175	9-5	18	80	803
7.30	1175	9-5	18	81	821
8.30	1175	9-5	18	82	839

NE 5 8 cell Disc same anode

June 19.

AM	Ohm	Volts	Amp	Amp	Total
9.30	1175	9½	18	83	857
10.00	1175	9½	18	83	866

Out 47½ hours

18½ Amp Ar. hours

June 22 - 10-30 Anode Chamber filled up with copper piece

No 5 Bath 4th Disc in

JUNE 22 PM	Slv	Volts	Amp	Temp	Total
.30	1175	9½	17	83	
2.30	1175	9½	17	83	17
1 June 23					
.30	1175	9½	17	80	34
.30	1175	9½	17	80	51
.30	1175	9½	17	80	68
.30	1175	9½	17	80	85
.30	1175	9½	17	80	102
.30	1175	9½	17	81	119
.30	1175	9½	17	81	136
.30	1175	9½	17	83	153
.30	1175	9-5	17	83	170
.30	1175	9-5	17	83	187
.30	1175	9-5	17	83	204
2.30	1175	9-5	17	82	221
PM .30	1175	9.5	17½	83	238
.30	1175	9.5	17½	83	256
.30	1175	9.5	18	83	273
.30	1175	9.5	18	83	291
.30	1175	9-5	18	83	309
6.30	1175	9-5	18	83	327
7.30	1175	9-5	18	83	345
8.30	1170	9-5	18	83	363
.30	1170	9-5	18	83	381
0.30	1170	9-5	18	84	399

23

No-5 Bath 4th Sec

JUNE 23 PM	Sec	Volts	Amp	Temp	Total
1.30	1170	9½	19	84	417
2.30	1170	9½	19	84	436
M June 24					
.30	1170	9½	19	80	453
.30	1170	9½	19	80	474
.30	1170	9½	18½	80	492
.30	1170	9½	19	80	511
.30	1170	9½	19	80	530
.30	1170	9½	19	80	549
.30	1170	9½	19	80	568
.30	1170	9½	19	82	587
.30	1170	9½	20	83	607
.30	1170	9½	19	83	626
.30	1170	9½	19	83	645
2.30	1170	9½	19	83	664
PM .30	1170	9½	18	83	682
.30	1170	9-5	18	83	700
3-30	1170	9-5	19	83	719
4.30	1170	9-5	19	83	738
5.30	1170	9-5	19	80	757
6.30	1170	9-5	18½	80	775
7.30	1170	9-5	17½	80	793
8.30	1170	9-5	17½	80	810
9.30	1170	9-5	17½	83	827
10.30	1170	9-5	17	83	844

over

In June 22-11.30-PM

No 5 Bath 4th Dis. same Amed
861 Amp in 48 hours
at 18 Amp Per hour

Out June 24-11.30

No 5 Bath 4 Dis.

JUNE 24 PM	Sgn	Volts	Amp	Amp	Total	
~~1130~~ 1130 PM	1170	9½	17	83	861 Amp	Out

Bath No 5 5th Disc in

June 25.0

AM	Spec	Volts	amp	Temp	
10.30	1175	9-5	15	82	
11.30	1175	9-5	16	82	16
12.30	1170	9-5	17	80	33
1.30 PM	1170	9-5	17	80	50
2.30	1170	9-5	17	80	67
3.30	1170	9-5	17	80	84
4.30	1170	9-5	17	80	101
5.30	1170	9-5	17	80	118
6.30	1170	9-5	17	80	135
7.30	1170	9-5	17	80	152
8.30	1170	9-5	16½	80	168
9.30	1170	9-5	16½	82	185
10.30	1170	9-5	17	82	202
11.30	1170	9-5	17	80	219
12.30	1170	9-5	17	82	236
1.30	1170	9-5	17	83	253
2.30	1170	9-5	16½	83	269
3.30	1170	9-5	16½	83	286
4.30	1170	9-5	16	83	302
5.30	1170	9-5	16	82	318
6.30	1170	9-5	16	82	334
7.30	1170	9-5	16	83	350
8.30	1170	9-5	15	83	365
9.30	1170	9-5	15	83	380
10.30	1170	9-5	16	83	396

Bath No 5

5 disc in

	Spec	Volts	amp	Temp	
11-30	1170	9-5	16	83	412
12-30	1170	9-5	16	83	428
1.00	1170	9-5	16	80	444
2.00	1170	9-5	16	80	460
3.00	1170	9-5	16	83	476
4.00	1170	9-5	16	83	492
5.00	1170	9-5	16	80	508
6.00	1170	9-5	16	80	524
7.00	1170	9-5	16	83	540
8.00	1170	9-5	16	83	555
9.00	1170	9-5	16	83	571
10.00	1170	9-5	16	83	586
11.00	1170	9-5	16	83	602
12.00	1170	9-5	16	81	618
AM June 27					
1.00	1170	9-5	16	81	634
2.00	1170	9-5	16	80	650
3.00	1170	9-5	16	81	666
4.00	1170	9-5	16	81	682
5.00	1170	9-5	16	81	698
6.00	1170	9-5	16	81	714
7.00	1170	9-5	16	81	730
8.00	1170	9-5	16	81	746
9.00	1170	9-5	16	83	762
10.00	1170	9-5	16	83	778
11.00	1170	9-5	16	83	794

Bath No 5

5th disc Out

June 27 P.M.	Slow	Volts	Amp	Amp	Total
12.00	1170	9.5	16	83	810
1.00	1170	9-5	16	83	826
2.00	1170	9-5	16	83	842
3.00	1170	9-5	16	83	858
3.30	1170	9-5	16	83	866 Amp
			Out		
					53½ hours
				16 Amp	Per hours

No 5 Bath 6th Disc in

Transfered # 6th disc to #3 tank

June 27 P.M.	Ohm	Volts	Amp	Amp	Total	
5.00	1170	9½	15½	83		
6.00	1170	9-5	16	83	16	
7.00	1170	9-5	16	83	32	
8.00	1170	9-5	16	83	48	
9.00	1170	9-5	16½	81	64-5	
10.00	1170	9-5	16½	81	81	
11.00	1170	9-5	17	81	98	
12.00	1170	9-5	17	80	115	
A.M. June 28						
1.00	1170	9-5	17	80	132	
2.00	1170	9-5	17	80	149	
3.00	1170	9-5	16	81	165	
4.00	1170	9-5	16	81	181	
5.00	1170	9-5	16	81	197	
6.00	1170	9-5	16	81	213	
7.00	1170	9-5	16	82	229	
8.00	1170	9-5	15½	82	244	
9.00	1170	9-5	15	81	259	
10.00	1170	9-5	15	81	274	
11.00	1170	9-5	15	83	289	
12.00	1170	9-5	15	83	304	
1.00	1175	9-5	14	80	318	
2 "	1175	9-5	14.5	83	332	3. P.M. Transfer to
3 "	1175	9-5	17.5	81	349	#3 tank.
4 "	1150	9-5	17.5	82	366	Low Amp.

#5 Bath

6th disc.

Transferred to #3 Batt. acct low amps.

June 28, 20.

Date	Sp. Gr.	Volts	amps	Temp	Total	
5 P.M.	1165	9-5	18.5	78	394	
6 "	1165	9-5	18.5	80	413	
7 "	1165	9-5	19	80	431	
8 "	1165	9-5	19-5	80	450	
9 "	1165	9-5	16.	80	466	
10 "	1165	9.5	16.	80	482	
11 "	1165	9-5	15½	80	498	
12 "	1165	9-5	16	80	514	
1 AM	June 29					
1.00	1165	9-5	16	81	530	
2.00	1165	9-5	16	81	546	
3.00	1165	9-5	16	82	562	
4.00	1165	9-5	16	82	578	
5.00	1165	9-5	16	81	594	
6.00	1165	9-5	16	81	610	
7.00	1165	9-5	16½	82	626	
8.00	1165	9-5	16½	82	643	
9 AM	1165	9-5	17	87	660	
10 "	1165	9-5	16	86	676	at 10.15 Volts raised .5 point
11 "	1165	10	17.	90	693	
12 m.	1165	10	17.5	86	710	
1 PM.	1165	10.	17	90	727	
2 "	1165	10.	16.5	90	744	
3 "	1165	10	16.5	90	760	
4 "	1165	10.	16.5	88	777	

#5 Bath 6th " disc.

Transfered to #3 Bath acct. low amps.

June 29, 20.

Date	Sp Gr	Volts	Amps	Temp	Total	777
5 PM	1165	10	16.5	87	793	
6 "	1165	10	16.5	85	810	
7 "	1165	10	16.5	85	826	
8 "	1165	10	16	85	842	
9 "	1165	10	16	85	858	Out
10 "						

5 Bath #6 disc -
Transfered to #3 Bath account low amps, Bottom of bath some crystals in anode chamber.

Start June 27, 20. 5. P.M.
Finish " 29. 20. 9. P.M.
Total Amps = 858
Hours = 52
Average Amps = 16.5

#5 Bath

Start June 28, 20.

#7 disc.

after cleaning out crystals and anode chamber put back old scrap anode after washing same.

Date	Sp Gr	Volts	Amps	Temp	Total	
June 30 1919	1162	9.5	15	80		
5 "	1165	9-5	16	78	16	
6 "	1165	9-5	17	80	33	
7 "	1165	9-5	16	80	49	
8 "	1165	9-5	16	80	65	
9 "	1165	9-5	16.5	80	81	
10 "	1165	9-5	16.5	80	98	
11 "	1165	9-5	16.5	80	114	
12 "	1165	9-5	16.5	80	131	
AM June 29						
1.00	1165	9-5	16½	81	147	
2.00	1165	9-5	16½	81	164	
3.00	1165	9-5	16½	82	180	
4.00	1165	9-5	16½	82	197	
5.00	1165	9-5	16½	81	213	
6.00	1165	9-5	16	80	227	
7.00	1165	9-5	16	82	245	
8.00	1165	9-5	16½	82	262	
9 —	1165	9-5	16.5	87	278	
10 —	1165	9.5	16.5	86	294	Raised ½ V. at 10.15 AM
11 —	1165	10 —	17	90	311	
12 —	1165	10.	18	86	329	
1 P.M.	1165	10.	17	90	346	
2 "	1165	10	17.5	90	363	
3 "	1165	10	17.5	90	380	

#5 Bath

#7 Weise
after cleaning out crystals and anode chamber & put back old scrap anode, after washing same

June 29, 20.

Date	Sp Gr	Volts	Amps	Temp	Total
4 PM	1165	10	17	88	397
5 "	1165	10	17.5	87	414
6 "	1165	10	17.5	85	432
7 "	1165	10	17-5	85	449
8	1165	10	17	85	466
9	1165	10	16-5	85	483
10	1165	10	16-5	85	499
11	1165	10	16	85	505
12:00	1165	10	16	83	521
AM	June	30			
1.00	1165	10	17	82	538
2.00	1165	10	17	82	555
3.00	1165	10	17	82	572
4.00	1165	10	16	81	588
5.00	1165	10	16½	81	604
6.00	1165	10	17	81	621
7.00	1165	10	17	81	638
8.00	1165	10	16	81	654
9 AM	1165	10	16	80	670
10 —	1165	10	16	82	686
11 —	1165	10	16	83	702
12 —	1165	10	16	80	718
1 PM	1165	10	16	85	734
2 "	1165	10	16	82	750
3 "	1165	10	16	81	766

52.5) 861 (16.4
525
3360
3150
2100
2100

~~16.1~~

~~525) 861 (1.64~~

5 Bath — #7 disc.

Start — 4.30 P.M.
Finish — 9. P.M.
Total Amp. = 861
" " = 52½
Average Amp. = 16.4

5 Bath } #7 disc. after cleaning out crystals and anode abandon, put back old scraps anode after washing same.

March 30, 20

Date	Sp. gr.	Volts	Amp.	Temp.	Total	76
4 PM	1165	10	16	80	782	
5 —	1165	10	16.5	80	798	
6 —	1165	10	16	80	814	
7 —	1165	10	16	80	830	
8 —	1165	10	16	80	846	
9 PM	1165	10	15	80	861	Quit

Note

Then Copper strap
fixed anode –

Wash rag screwed

Wash rag white color
about ½ mesh.

No 5 Bath 1st Disc in

JULY 3 PM	Hr	Volts	Amp	Temp	Total
1.00	1165	9-5	16	80	
2.00 PM	1165	9-5	16	80	15
	JULY 4th				
1.00	1165	9-5	16	80	32
2.00	1165	9-5	18	80	[illegible]
3.00	1165	9-5	18	83	[illegible]
[illegible]	1165	9-5	18	83	[illegible]
7.00	1165	9-5	18	[illegible]	104
8.00	1165	9-5	18	83	[illegible]
9.00	1165	9-5	18	[illegible]	[illegible]
10.00	1165	9-5	17½	84	[illegible]
9	1165	9-5	18	84	175
10	1165	9-5	18	84	193
11	1165	9-5	18	82	211
12.00 PM	1165	9-5	17	82	228
1.00	1165	9-5	18	82	246
2.00	1165	9-5	17	84	263
3	1165	9-5	17	83	280
4	1165	9-5	17	83	297
5	1165	9-5	17	83	314
6	1165	9-5	17	82	331
7	1165	9-5	17	82	348
8	1165	9-5	16	81	364
9	1165	9-5	16-5	81	380
10	1165	9-5	17	81	397

not a much o

Cleaned up .041
Outside Caliper = .052
Inside " = ?

Run total to 745 Amps,

46 | 765 | 16.5
300
76
240
230

after cleaning tank free from grease & oil.
Not Turned

Bath No. 5 765 amps
46 hrs plating

Cab. No 3 outside least,

Average .070 #5 Bath
Start July 3, 20. 11. PM. #1 disc
Finish " 5, 20, 9. PM.
Total Amps 765
" hours 46
Average Amps. 16.5

No 5 Bath 1st Disc in

JULY 4 PM	Hr	Volts	Amp	Temp	Total	
11.00	1165	9-5	16-5	81	413	not a mistake
12.00	1165	9-5	16-5	81	430	
AM	July 5					
1.00	1165	9-5	16-5	81	446	
2.00	1165	9-5	16-5	81	463	
3.00	1165	9-5	16	81	479	
4.00	1165	9-5	15-5	81	494	
5.00	1165	9-5	15-5	81	510	
6.00	1165	9-5	15-5	81	525	
7.00	1165	9-5	15-5	81	541	
8.00	1165	9-5	15-5	81	556	
9.00	1165	9-5	15-5	81	572	not a mistake
10.00	1165	9-5	16	81	588	
11.00	1165	9-5	16	81	604	
12.00	1165	9-5	16½	81	620	
PM 1.00	1165	9-5	16	81	636	
2.00	1165	9-5	15-5	81	652	
3.00	1165	9-5	16	81	668	
4.00	1165	9-5	16	81	684	
5.00	1165	9-5	16	81	700	
6.00	1165	9-5	16	81	716	
7.00	1165	9-5	16½	81	732	not a mistake
8.00	1165	9-5	16½	81	749	
9.00	1165	9-5	16½	81	765	Cutt
				46 hrs		

Mounted in Bath No 5 edge was rounded off

Wire, revolves 1½ R.P.M.

Added 5 cc general bath dope to plating solution 11 30 AM. July 7

Bath No 5 — 2 dose in

July 6 P.M.

	Spec-	Volts	amps	Temp	Ptc
2-30	1165	9-5	14	80	
3-30	1165	9-5	14	80	14
4-30	1165	9-5	15	58	29
5-30	1165	9-5	16	83	45
6-30	1165	9-5	16	83	61
7-30	1165	9-5	16-5	84	77
8-30	1165	9-5	16-5	84	94
9-30	1165	9-5	16	84	110
10-30	1165	9-5	16	84	126
11.30	1165	9-5	16-5	84	142
12.30	1165	9-5	15-5	84	[illegible]
AM	July 7, 20.				
1.30	1165	9-5	15-5	84	[illegible]
2.30	1165	9-5	15-5	84	[illegible]
3.30	1165	9-5	15-5	84	[illegible]
4.30	1165	9-5	15-5	84	[illegible]
5.30	1165	9-5	15-5	84	[illegible]
6.30	1165	9-5	15-5	84	[illegible]
7.30	1165	9-5	15-5	84	266
8.30	1165	9.5	16.	85	282
9.30	1165	9-5	15.	85	297
10 30	1165	9-5	15.5	85	313
11 30	1165	9-5	15.	83	328
12 30	1165	9-5	15.	82	343
1.30 PM.	1165	9-5	14.5	82	357

#5 Bath

2nd reduction

July 7 Date	Sp. gr.	Volts	Amps	Temp	Total
2.30 PM	1165	9.5	15	83	372
3.30	1165	9.5	15	84	387
4.30	1165	9.5	15	85	402
5.30	1165	9.5	15	85	417
6.30	1165	9.5	15	84	432
7.30	1165	9.5	15	84	447
8.30	1165	9.5	15	83	462
9.30	1165	9.5	14.5	83	476
10.30	1165	9.5	15	82	491
11.30	1165	9.5	15	82	506
12.30	1165	9.5	15	82	521
AM	July 8				
1.30	1165	9.5	15	82	536
2.30	1165	9.5	15	82	551
3.30	1165	9.5	15	82	[illegible]
4.30	1165	9.5	15	82	581
5.30	1165	9.5	15	82	[illegible]
6.30	1165	9.5	14.5	82	[illegible]
7.30	1165	9.5	15	82	[illegible]
8.30	1165	9.5	15	[illegible]	[illegible]
10.30	1165	9.5	16	80	657
11.30	1165	9.5	15.5	80	672
12.30	1165	9.5	15	82	687
2.30	1165	9.5	14½	82	702
3.30 PM	1165	9.5	14.5	80	716

49) 745 (15.2
49
255
245
100

#5 Bath 2nd disc.

Mould Edge was removed off.
Also added 15 cc general bath dip to pol.
Start. July 6, 20-- 2 30 P.M.
Finish July 8, 20- 3 30 P.M.
Total Amp. 745
" hrs 49
Average A/p 15.2

#5 Bath 2nd disc.

July 8, 20.

Clock	Sp. Gr	Volt	Amp	Tem	Total	
2 30 PM	1165	9.5	14.5	80	730	
3 30	1165	9.5	14.5	80	745	Cut to make room for disc. which was rubber coated.

Disc was suspended by wire into copper bath
Rubber coated

Remarks. 6 holes in disc which plated.

5 Bath 3rd disc.

Start July 8, 20, 330 P.M.

Date	Speed	Volt	Amps	Temp	Time	
330	1165	9.5	10.5	80		
432	1165	9.5	13.5	80	13.	Out

Rotated 30 minutes with 60 cc. Rubber Cement, from Combination Rubber Co.. Rotate at 36 R.P.M. Run to 600 Amp-Hrs give to Mr. Edison for record with rubber the, knobs on back of disc.

added 10cc gen. bath dope to stop further polete pol. at 11 AM July 9,

#5 Bath

Disc

Start July 8, 20. 5 10 P.M.

Date	Sp Gr	Volt	Amps	Temp	Total	Remarks
5.10 P.M.	1165	9.5	14.5	80		Test for knobs
6.10	1165	9.5	14.5	81	14	on back of disc.
7.10	1165	9-5	14-5	80	29	
8.10	1165	9-5	14-5	80	43	
9.10	1165	9-5	14.5	80	58	
10.10	1165	9-5	14	80	72	
11.10	1165	9-5	14	80	86	
12.10	1165	9-5	14	80	100	
AM July 9						
1.10	1165	9-5	14	80		
2.10	1165	9-5	14	80		
3.10	1165	9-5	14	80		
4.10	1165	9-5	14	80		
5.10	1165	9-5	14	80		
6.10	1165	9-5	14.5	80		
7.10	1165	9-5	14.5	80		
8.10	1165	9-5	14	80	227	
9.10 AM	1165	9.5	14.5	78	227	
10.10	1165	9.5	15	79	242	Added 1 cc dope stop
11.10	1170	9.5	15.5	80	258	
12.10	1165	9.5	15.5	80	273	
1.10 PM	1165	9.5	15.5	82	289	
2.10	1165	9.5	15.5	81	304	
3.10	1165	9.5	15.5	81	320	
4.10	1165	9.5	15.5	80	336	

23 hrs.

41 | 609 | 14.8

41
199
164
350
328

Start July 9, 20 – 5.10 P.M.
Finish " 10, 20 – 10. A.M.
Total Amps 609
" hours 41
Average Amps 14.8

#5 Bath

4 disc
60 cc Rubber

July 9, 20.

Time	Sp. Gr.	Volts	Amp	Temp	Total	Remarks
5.10 P.M.	1165	9.5	15.5	80	351	Test for bubbles
6.10	1165	9.5	15.5	80	367	on back of disc
7.10	1165	9.5	15.5	80	382	Test #2.
8.10	1165	9.5	15.5	80	398	
9.10	1165	9.5	15	80	413	
10.10	1165	9.5	15	80	428	
11.10	1165	9.5	15	80	[illegible]	
12.10	1165	9.5	15	80	[illegible]	
	July 10, 20.					
1.10 A.M.	1165	9.5	15	80	[illegible]	
2.10	[illegible]	9.5	15	[illegible]		
3.10	[illegible]	9.5	15	[illegible]		
4.10	[illegible]	9.5	15	[illegible]		
5.10	[illegible]	9.5	15	[illegible]		
6.10	[illegible]	9.5	15	[illegible]		
7.10	1165	9.5	15	[illegible]	[illegible]	
8.10	1165	9.5	15	80	578	
9.–	1165	9.5	15	80	593	
10.–	1165	9.5	16	80	609	Take out for Mr Edison inspection to take off bubbles

60cc Rubber Coated Disc 2nd time in start at 1.00 PM July 10, 20 for 750 Amp

10.00 AM Put in more scrap Pieces

No 5 Bath

JULY 10 PM	Lbs	Volts	Amp	Temp	Total
1.00	1165	9-5	14	80	
2.00	1165	9-5	14	80	14
3.00	1165	9-5	15	80	29
4.00	1165	9.5	15.5	80	44
5	1165	9.5	16.	80	60
6	1165	9.5	15.5	80	76
7	1165	9.5	15-5	80	91
8	1165	9-5	15-5	80	106
9	1165	9-5	15-5	80	122
10	1165	9-5	15-5	80	137
11	1165	9-5	15-5	80	[illegible]
12	1165	9-5	16	80	[illegible]
AM	July 11, 20.				
1.00	1165	9-5	16	[illegible]	[illegible]
2.00	1165	9-5	15-5	[illegible]	[illegible]
3.00	1165	9-5	15-5	80	[illegible]
4.00	1165	9-5	15-5	[illegible]	[illegible]
5.00	1165	9-5	15-5	[illegible]	[illegible]
6.00	1165	9-5	15	[illegible]	261
7.00	1165	9-5	15	[illegible]	276
8.00	[illegible]	9-5	15	[illegible]	291
9.00	1165	9-5	16	80	307
10.	1165	9-5	18	80	325
11	1165	9-5	16-5	80	341
12 PM	1165	9-5	16-5	80	357

No 5 Bath 60cc Rubber Coat

JULY 11 PM	Lbs	Volts	Amps	[illegible]	[illegible]
1.00	1165	9-5	16-5	80	373
2.00	1165	9-5	16-5	80	390
3	1165	9-5	17	80	406
4	1165	9-5	17	80	423
5	1165	9-5	17	80	440
6	1165	9-5	17-5	81	457
7	1165	9-5	17-5	81	475
8	1165	9-5	17-5	81	491
9	1165	9-5	17-5	81	508
10	1165	9-5	17-5	81	526
11	1165	9-5	17-5	81	[illegible]
12	1165	9-5	17-5	81	[illegible]
AM July 12					
1.00	1165	9-5	17	[illegible]	[illegible]
2.00	1165	9-5	17	[illegible]	[illegible]
3.00	1165	9-5	17	[illegible]	[illegible]
4.00	1165	9-5	17	[illegible]	52
5.00	1165	9-5	17	[illegible]	[illegible]
6.00	[illegible]	9-5	17	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	17		[illegible]
[illegible]	[illegible]	[illegible]			16
9	1165	9.5	17	83	713
10	1165	9.5	17	82	730
11	1165	9.5	17	82	747
12	1165	9.5	17.5	80	764

50 | 806 | 16.
50
306
300

60 cc Rubber coated disc.

Start July 10, 20 at 1 P.M.
Finish " 12, " " 2 30 "
Total Amps 806
" hours 50
Average Amps 16.

#5 Bath

60 cc Rubber coated disc

July 12, 20.

Time	Sp. Gr.	Volts	Amps	Temp	Total	
1 P.M.	1165	9.5	17.5	80	782	
2	1165	9.5	17	80	799	
2 30	1165	9.5	17	80	806	Out

155 amps Nickel Plated

Put in dry, Copper

Gradually to 3.6 Amps at the 9th notch, then full current.

5 Bath

Started July 12, 20. 3 P.M.

Time	Sp. Gr.	Volts	Amp	Temp.	Tot. C
3 PM	1165	9.5	17.5		
4	1170	9.5	17.5	80	18
5	1165	9.5	19.	80	37
6	1165	9.5	18.5	80	55
7	1165	9.5	17.5	80	73
8	1165	9.5	17.5	80	90
9	1165	9.5	17.5	81	108
10	1165	9.5	18.	83	126
11	1165	9.5	18.	83	144
12	1165	9.5	17.5	83	161
July 13, 20.					
1 PM	1165	9.5	17	81	178
2.00	1165	9.5	17	81	[illegible]
3.00	1165	9.5	16.5	81	[illegible]
4.00	1165	9.5	16.5	81	[illegible]
5.00	1165	9.5	16.5	81	[illegible]
6.00	1165	9.5	16.5	81	261
7.00	1165	9.5	16	82	[illegible]
8.00	1165	9.5	16	82	293
9:00	1165	9.5	17.	82	310
10.00	1165	9.5	16.5	82	327
11.00	1165	9.5	16.5	83	341
12	1165	9.5	16.5	83	358
1 P.M.	1165	9.5	17.5	83	375
2.00	1165	9.5	17	85	392

43) 718 (16.7
43
288
258
300
301

Start
Finish
Total Amps 718
" Hours 43
Average Amp 16.7

#5 Batch.

July 13 20.

Time	Sp Gr	Volts	Amps	Temp	Total C.	
3 P.M.	1165	9.5	16.5	85	409	
4 —	1165	9.5	16.5	85	426	
5	1165	9.5	16	85	442	
6	1165	9.5	17	80	459	
7	1165	9.5	17	80	476	
8	1165	9.5	16.5	85	492	
9	1165	9.5	16.5	84	509	
10	1165	9.5	16.5	84	525	
11	1165	9.5	17	83	542	
12	1165	9.5	17	83	559	
AM	July 14					
1.00	1165	9.5	16	83	575	
2.00	1165	9.5	16	[illegible]	[illegible]	
3.00	1165	9.5	16	[illegible]	[illegible]	
4.00	1165	9.5	16	[illegible]	[illegible]	
5.00	1165	9.5	16	[illegible]		
6.00	1165	9.5	15.5	[illegible]		
7.00	1165	9.5	15.5	[illegible]		
8.00	1165	9.5	16			
9 —	1175	9.5	15.5	80	702	
10 —	1165	9.5	16.5	80	718	Cut

Rev. 2 min in Ni Bath, no current
143 amps in Ni bath #2
Wash common water in whirler,
rinse with distilled water and
put in oven dry in Copper
full immersion.

#5 Bath

Started July 14, @ 12 30 noon.

Time	Speed	Volts	Amps	Temp	Total
12 30	1165	9.5	16.5	85	
3 30	1165	9.5	17	87	17
4 30	1165	9.5	16.5	85	34
5 30	1165	9.5	16.5	85	51
6 30	1165	9.5	16.5	86	67
7 30	1165	9.5	16.5	85	8[illegible]
8 30	1165	9.5	16.5	85	1[illegible]
9 30	1165	9.5	16.5	8[illegible]	1[illegible]
10 30	1165	9.5	16.5	83	1[illegible]
11 30	1165	9.5	16.5	8[illegible]	1[illegible]
12 30	1165	9.5	16.5	[illegible]	[illegible]
AM	July 15, 20.				
1 30	1165	9.5	16.5	8[illegible]	
2 30	1165	9.5	[illegible]	[illegible]	
3 30	1165	9.5	16.5	[illegible]	
4	1165	9.5	[illegible]		
5	1165	[illegible]	[illegible]		
6	[illegible]				
7	1165	[illegible]	[illegible]		
8	1175	9.5	16		
9	1175	9.5	16.5	[illegible]	[illegible]
10 30	1165	9.5	17	81	331
11 30	1165	9.5	17	80	346
12 30	1165	9.5	17	80	365
1 30 AM	1165	9.5	17	80	382

42] 758 (18.
42 ×
338
336

Total Amps 758
" hours 42
Average Amps 18

5 Bath

July 15, 20

Time	Sp. Gr	Volts	amps	Temp	Total	3.2
2:30 PM	1165	9.5	17	80	399	
3:30	1165	9.5	16½	80	416	
4:30	1165	9.5	16.5	80	433	
5:30	1165	9.5	17.5	80	450	
6:30	1165	9.5	18	83	468	
7:30	1165	9.5	18.5	92	487	
8:30	1165	9.5	20	92	507	
9:30			20		527	
10:30			21		548	
11:30	1165		21.5		569	
12:30						

July 16, 20.

1:30 AM	1165	9.5				
2:30						
3:30						
4:30						
5:30						
6:30						
7:30						
8:30						Cut

Exp. for knots + trees.

Ni face female
Considerably rounded edges disc.
Put in dry
Revolve 20 min, then full current on
Ran to 124 amps in bath.
No blisters.

Putting Copper bath dry.
5 people finder marked disc.
Put on full current.

Trees started after 12 hr.
in copper bath.

5 Bath

Started July 16, 20. @ 11 — P.M.

Time	Sp Gr	Volts	amps	Temp	Total	
11 PM	1165	9.5	16.5	89		
12	1165	9.5	17	89	17	
		July 17	20.			
1 AM	1165	9.5	18	90	35	
2	1165	9.5	18	90	53	
3	1165	9.5	18	90	71	
4	1165	9.5	20	90	91	
5	1165	9.5	20	90	111	Transferred
6	1165	9.5	19	90	130	from #2 Ni
7	1165	9.5	18.5	90	148	bath to this
8	1165	9.5	18.5	93	167	and has 124 amps
9	1165	9-5	19	93	186	Ni Plated
10	1165	9.5	18.5	93	204	
11	1165	9.5	17.	93	221	Trees started
12	1165	9.5	17	90	238	
1	1165	9.5	17	90	255	
2	1165	9.5	18	95	273	
3	1165	9.5	18	95	291	
4	1165	9.5	18	95	309	
5	1170	9-5	18	9-5	327	
6	1170	9-5	18	95	345	
7	1170	9-5	18	90	363	
8	1170	9-5	18	90	381	
9	1170	9-5	17	90	398	
10	1170	9-5	17	90	415	
11	1170	9-5	17	89	432	

Total Amps 749
11 hours 43
Average Amp 17.5 Amp

Bath No 5

July-17-20

Time	Ohm	Volts	Amp	Amp	Total
12.00	1170	9-5	17	92	449
	July-18-20				
1.00	1170	9.5	17-5	92	466
2.00	1170	9.5	17.5	92	483
3.00	1170	9.5	17.5	92	501
4.00	1170	9.5	16-5	92	517
5.00	1170	9-5	16-5	92	534
6.00	1170	9-5	16-5	90	549
7.00	1170	9-5	16-5	90	566
8.00	1170	9-5	16-5	90	581
9.00	1170	9-5	16-5	90	597
10	1170	9-5	16-5	90	614
11	1170	9-5	16-5	90	629
12 PM	1170	9-5	16-5	90	645
1.00	1170	9-5	17	92	662
2	1170	9-5	17	92	679
3	1170	9-5	17	92	696
4	1170	9-5	18	94	714
5	1170	9-5	18	94	732
6	1170	9-5	18	94	749 Amp
			Out		43 hours

Put 1 oz face 78 amps
Put in #5 Copper bath
dry - full current on

Faces started 4 hours
after Copper plate,

#5 Bath

started July-18-20 - 7.00 P.m

Time	Hrs	Volts	Amps	Temp	Total	
7.00	1170	9-5	17	94		
8-00	1170	9-5	17	90	17	
9-30	1170	9-5	17	90	34	
10-00	1170	9-5	17	90	51	
11.30	1170	9-5	17	90	[illegible]	
12.00	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	
A.M	July 19					
1.00	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	
2	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	
3	[illegible]	[illegible]	[illegible]			
4	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	
5	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	
7.30	1170	9.5	17	90	[illegible]	
8.00	1170	9.5	17	90	222	
930	1170	9.5	16.5	90	238	
1030	1165	9.5	16.5	90	255	
1130	1165	9.5	16.5	90	271	
12.30 PM	1165	9-5	17.5	94	289	
1.30	1165	9-5	18.	94	307	
2.30	1165	9.5	18	92	325	Transferred from #1 Bath 7.30 PM July 18, 20
330	1165	9.5	18	90	343	
430	1165	9.5	18	88	361	
530	1165	9.5	18	88	379	78 amps
630	1165	9.5	18	85	397	Started

Total 20 oz Copper deposited
Solution out 12.30 PM
July 19, 20

43) 747 (17.3
43
317
301
160
129

Total Amp hr 747
" hours 43
Average Amp hr 17.3

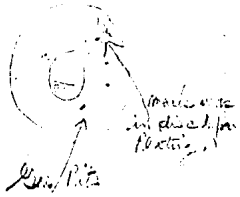
#5 Bath July 19th
O.B. Kosatka

Time PM	Sp. Gr.	Volts	Amps	Temp	Total
7 30	1165	9.5	17	85	414
8 30	1165	9.5	17	85	431
9.30	1165	9.5	16.5	85	447
10 30	1165	9.5	17	90	464
11 30	1165	9.5	17	92	481
12 30	1165	9.5	17	92	498
July 20, 20					
1 30 AM	1165	9.5	17	91	515
2 30	1165	9.5	17	91	[illegible]
3 30	1165	9.5	17	76	[illegible]
4 30	1165	9.5	17	76	[illegible]
5 30	1165	9.5	18	76	[illegible]
6 30	1165	9.5	18	76	603
7 30	1165	9.5	18	76	621
8 30	1170	9.5	18	90	639
9 30	1170	9.5	18	90	658
10 30	1165	9.5	18	90	674
11 30	1165	9.5	18	90	692
12 30	1165	9.5	18.5	95	711
1 30	1165	9.5	18	93	729
2 30	1165	9.5	18	92	747 Cut

Chi Effect #1

Jan. 12, 21

Time	sp gr	Temp	Volt	Amp	Total	Hrs	Remarks
2	1225	110	13	5			gained considerable
230	"	"	"	20	2	1/2	by looks as if the
330	"	"	"	20	22	1 1/2	gas bubble attack
430	"	"	"	20	42	2 1/2	band made fits
530	"	"	"	20	62	3 1/2	5/1000 thick



Effect

Effect 3 1/2 hrs
5/1000 thick

3" cathode to anode
1/4" Baffle under cathode
17 1/2" anode surface
9 1/4" hole in shape
disc covered with
linen
50 R.P.M. on rotator.
1225 sp gr at 110°F

Jan. 13, 21 — Ni Effect #2

Time	Spark	Sample	Volt	Amp	Total	Hrs	Remarks
2:30	9225	105	11.5	5			
3:30	"	"	11.5	20	2	1	Duplicate of
4:30	"	"	11.5	20	22	2	#1 Effect
5:30	"	"	4	20	42	3	
6:30	"	"	"	20	62	4	
7:30	"	"	"	20	82	5	Cut

Calipers 6½/1000

Gas pits

Jan. 14, 21. — Ni #3 Effect

Time	Spark	Sample	Volt	Amp	Total	Hrs	Remarks
AM	1230	102	13	5			
	1220	106	12.5	20	5	1	Duplicate of
	"	109	13.5	20	25	2	#1 Effect
	"	1	12.5	20	45	3	
	"		12.5	20	65	4	
AM	"		12.5	20	85	5	

Gas pits [illegible] Centrifugal [illegible]

Calipers 7/1000

Mi Exper #4

Jan. 14, 21.

Time	Sp. Gr.	Temp.	Volt	Amp	Total	Hrs.	Remarks
12 30 P.M.	1225	105	12	5			Slip of #1 Except
1 30	"	110	"	20	2	1	raised baffle to
2 30	"	"	"	20	22	2	within 1/8" of cathode
3 30	1230	"	"	20	42	3	See if it will elim
4 30	"	"	"	20	62	4	any of the pits formed
5 30	1225	"	"	20	82	5	by the gassing.

6/1000

Mi Experiment 5

Jan. 14, 21.

Time	Sp. Gr.	Temp.	Volt	Amp	Total	Hrs	Remarks
5 30	1225	105	12	5			Duplicate of
6 30	"	110	13.5	20	2	1	#4
7 30	"	110	13	20	22	2	
8 30	1215	109	13	20	42	3	
9 30	"	106	12.5	20	62	4	
10 30		113	12.5	20	82	5	Cut

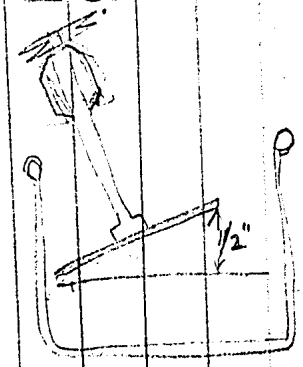
5 1/2/1000

Jan. 17, 21. Ni Eyper # 6

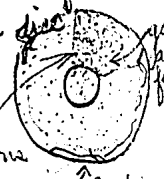
Time	Spgr.	Temp	Volt	Amps	Total	Amo	Remarks
				5			Duplicate of #4
11	1195	90	11.5				
12	"	91	11.5	20	5	1	Except Temp at 9
3	"	92	12	20	25	2	started, want to find
4		95	12.5	20	45	3	out what temperature
5		100	12.5	20	65	4	is sol. will go to
6	1185	102	12.5	20	85	5	without heat to

if it is possible to eliminate adding of Acetic Acid, which is driven off by heat.

7½ / 1000 Rough Matt surface



Disc plated very Brittle, The gas pits are uniform all over the disc

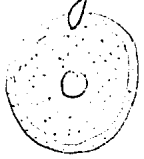


Taper of disc ½" to the foot.
Reason because some moulds have a hollow center which holds an air pocket that doesn't plate

Jan. 18, 21. Ni Eyper # 7

Time	Spgr	Temp	Volts	Amp	Total	Amo	Remarks
10	1180	95	18.	5			Temp started 95
10:2	"	98	13	20	5	1	Duplicate of #6
10:3	"	100	13.5	20	25	2	
10:4	1190	103	13.5	20	45	3	
10:5		105	"	20	65	4	
10:6	1200	108	14	20	85	5	Out

Gas pits throughout entire disc
Plating not brittle

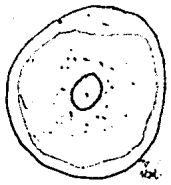


8/1000

Jan. 8, 21. Mi Eyser #8

Time	Speed	Temp	Volt	Amp	Total	Hour	Remarks
6 PM	1190	105	14	15			Start Temp 105°
7	"	"	"	20	5	1	
8	"	108	"	20	25	2	
9	"	"	"	20	45	3	
10	"	"	"	20	65	4	Cut
11	"	"	"	20	85	5	Cut.

Less gas pits than #7 gas pits more prominent about fewer, more in center than outside



7/1000

Jan. 19, 21. Mi Eyser #9

Time	Speed	Temp	Volt	Amp	Total	Hour	Remarks
30	1180	85	8.5	5			Speed 80 R.P.M.
30	"	98	8.5	20	5	1	
30	"	93	10.	20	25	2	
30	"	98	10.	20	45	3	
30	"	102	10.	20	65	4	
30	"	108	10.	20	85	5	Cut.

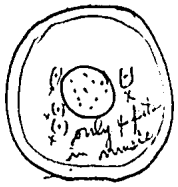
Door locked no one to come in unless keys given by night watchman. To check who goes in and out.

Mi Eppr #10

Jan. 19, 21.

Time	Sp. Gr.	Temp.	Volts	Amps.	Total	Hrs.	Remarks
4	1190	108	10.5	10			Dup. of #9 Eppr.
5	"	105	10.5	20	5	1	Except Temp. at start
6	"	106	10.5	20	25	2	108°F.
7	"	107	10.5	20	45	3	
8	"	106	10.5	20	65	4	added 100 cc Acetic
9	"	105	"	20	85	5	Disc had the gas pits
10							before adding Acetic
							at finish only a few gas pits observed on finished disc.
							Looks good.

6 | 1000



Eppr #11

Jan. 20, 21.

Time	Sp. Gr.	Temp.	Volts	Amps	Total	Hrs.	Remarks
2	1190	95	10.5	5			Duplicate of #
2:30	"	98	10.	20	5	1	10 Eppr.
3:30	"	103	10.	20	25	2	
4:30	"	108	"	20	45	3	added 100 cc Acetic
5:30 12 mid	"	108	11	20	65	4	at start
6:30	"	"	10.5	20	85	5	This seems to do the
7:30	"	"	10.5	20	105	6	trick, looked at disc
							after 1½ hour plating
							looked perfect.
							Quite some gas pits.
							80% pits at start of disc

Jan. 20, 21 Exper. #12

Time	Sp. Gr.	Temp.	Volts	Amp.	Sold.	Hrs.	Remarks
12	1190	105	10.	10			
1	"	107	"	10	10	1	Added 100 cc Acetic
2	"	"	"	10	20	2	Experiment for
3	"	"	11.	10	30	3	Mr Edison's as per
4	"	109	"	10	40	4	memo 8 to 10 amps
5	"	"	12.	10	50	5	for six hours, then put
6	"	"	11.5	10	60	6	in and back up with
							copper 75 amps both
							have stripped and turned
							want to take test
							from 1 to 2 to see if
							any trouble arises
							Mr Gold #7418 F.Y. has fin
							its run on fences.

See #78 Posted
Copper Exper

Jan. 21, 21.

Exper. #13

Time	Speed	Temp	Volt	Amp	Total	Hrs	Remarks
11 30	1195	102	11	10			Speed 118 R.P.M.
12 30	"	105	"	30	10	1	
1 30	"	"	"	30	40	2	
2 30	"		"	30	70	3	Cut
3	"	110	"	15	85	3½	Cut

Still has quite some gas pits through the

Caliper 6 / 1000

Jan. 21. 21

Exper. #14.

Speed	Temp	Volt	Amp	Total	Hrs	Remarks.
1195	110	11.	10			Duplicate of #13
"	112	11.	30	10	1	
"	115	11.	30	40	2	
"	117	11.	30	70	3	
"	117	"	15	85	3½	Cut

Have few gas pits

This disc ran very good before at the 600 R.P.M. look up Exper. 10 for reference.

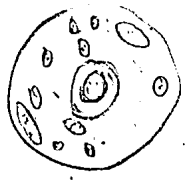
Mr Edison says finish discs with Early Polish machine

Caliper 5 / 1000

Jan. 22, 21. Eppen #15

Time	Spb.	Temp.	Volt	Amp	Total	Hrs.	Remarks
9 30	1215	108	11	10			Discarded working
10 30	"	"	"	30	10	1	mould which had
11 30	1200	110	"	30	40	2	finished its run
12 30	"	"	"	30	70	3	
1 30	"	115	"	30	100	4	Cents

Pitted all through

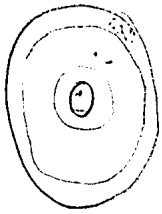


The stain marks this is due to non-fast in hot pol., if it is flax packing it would be " seed oil.

Calipers 6½/1000

Jan. 22, 21. Eppen #16

Time	Spb.	Temp.	Volt	Amp	Total	Hrs.	Remarks
8 00	1190	115	11	10			Mould polished Emery
9 00	"	"	12	30	10	1	then 8-4.
	1195	"	115	30	40	2	
	"	"	115	30	70	3	
12 00	1195	"	125	30	95	4	this Look very good



8/1000

2 Pit marks on inside. Look up Eppen #13 & see pit marks before the mould was polished with Emery.

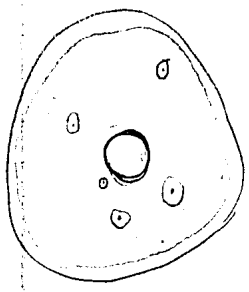
Jan 23, 21.

Copper # 17

Time	Sp. Gr.	Temp	Volt	Amp	Total	Hrs
10 AM	1225	102	10.	10		
11	"	106	10.	30	10	1
12	"	110	10	30	40	2
1	"	110	10	30	70	3
1 30	"	110	10	15	85	3 1/2

Remarks
Mould cleaned
Emery then 8-4

Deposit 5 1/4 / 1000



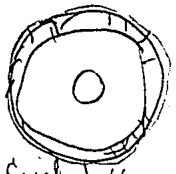
Jan. 25 21

Copper 18

Time	Sp. Gr.	Temp	Volt	Amp	Total	Hrs.
1	1225	85	10	10		
2	"	88	"	30	10	1
3	"	92	"	30	40	2

Remarks
Mould cleaned
before 8-4
Cuts

Start of solution
too cold came
loose from disc.,



Cracked all around edge
and loosened
No deposit

Jan. 25, 21.

Exper. #19

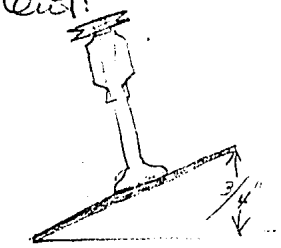
Time	Sp. Gr.	Temp.	Volt	Amp.	Total	Hrs.	Remarks
2	1220	100	10	10			Duplicate of #1
3	"	"	10	30	10	1	Exper, except mark
4	"	105	10	30	40	2	was cleaned by Em
5	1220	107	"	30	70	3	mach. before 8-[illegible]
6	"	110	"	30	100	4	Cut.

To see what effect cleaning mark before plating.

Seems to have faint dot same as Exper. #15. Except fatter separated

Exper. #20.

Time	Sp. Gr.	Temp.	Volt	Amp.	Total	Hrs.	Remarks
[illegible]	1220	98	10	10			Rise on an angle
[illegible]	"	102	10	30	10	1	of 3/4" to the left
[illegible]	"	105	11.5	30	40	2	the eliminate
[illegible]	"	"	11.5	30	70	3	the fat holes.
[illegible]	"	"	12	15	85	3½	Cut.



Excellent plating only notice one fat in music, and [illegible] inside, many in of label

All of label very bright plating, seems thinner at center.

Angle changed to 3/4" to left

Exper# 21

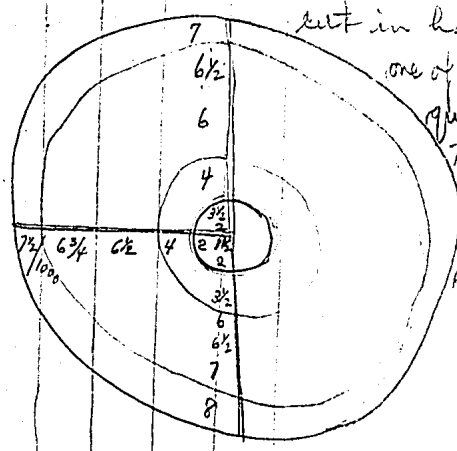
Time	Sp. & Temp	Volt	Amp	Total Hrs	Remarks
10.	1225 86	10.	10		Duplicate of #18
11	" 96	10.	30	10	10 Wanted to check
					see if cold sol.
					in course of such
					to strip while plat-
					ing when angle
					disc was increa
					cracked some but
					not as bad as
					#18 Exper.

No Good

Exper# 22.

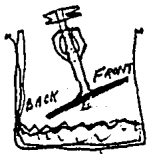
Time	Sp. & Temp	Volt	Amp	Total	Hrs	Remarks
	1225 98	9	10			
	" 102	"	30	10	1	Seems to be
	" 110		30	40	2	light plating at
	" 115		30	70	3	centers since
	125		15	85	3½	the angle was
						changed on disc.

Mr Edison had disc cut in half then one of the halves quartered for to see how solid part at different sections

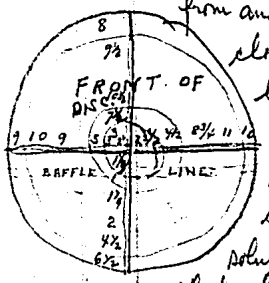


Exper # 23

Time	Sp. Gr.	Temp	Volt	Amp	Total	Hrs	Remarks
2	1225	100	10	10			Put in disc
3	"	"	"	30	10	1	did not rotate
4	"	105	"	30	40	2	want to see how
5	1220	"	10.5	30	70	3	thickness at center
5 30	1220	"	"	15	85	3½	when disc is cut into sections measure taken as below



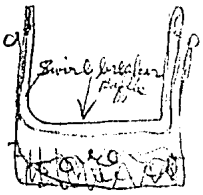
Disc cut in four sections. Front section further away from anode, so should be closer by 3/4" the bright plating. Stirrer is also somewhat for circulating of solution which washes the back part of disc

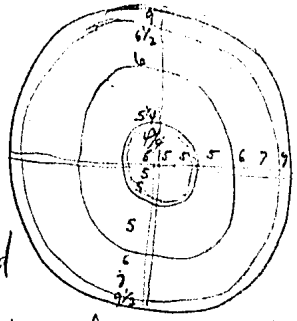


figures are caliper in 1000 of an inch.

Exper # 24

Time	Sp. Gr.	Temp	Volt	Amp	Total	Hrs	Remarks
2 30		98	9.	10			Took out the
3 30		102	8.5	30	10	1	9½" maple disc,
4 30		105	8.	30	40	2	with linen filter on.
5 30		108	8.	30	70	3	
6 30		112	8.	15	85	3½	



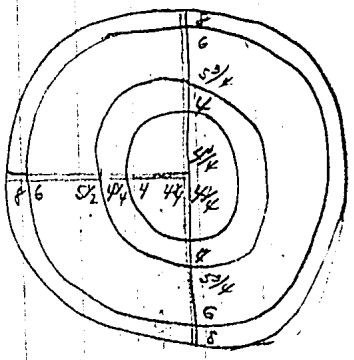


Caliper as marked

Note how closer caliper runs around disc.

Exper #25

Time	Sp Gr	Temp	Volt	Amp	Total	Hrs	Remarks
3:30	1.275	100	6.	10			Duplicate of Exp
4:30	"	"	"	30	10	1	#24. This sheet
5:30	"	105	7.5	30	40	2	is to make sure a
6:30	"	110	8	30	70	3	a check.
7	"	"	"	15	85	3½	cut



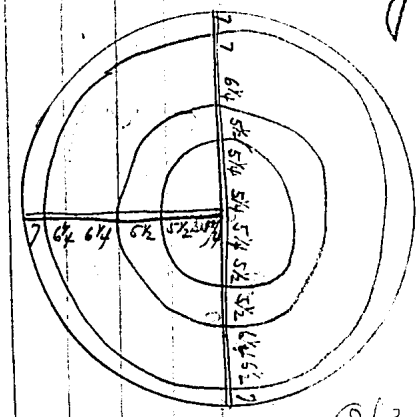
Calipers

Exper #26

Time	Sp Gr	Temp	Volt	Amp	Total	Hrs	Remarks
3:25	1.225	100	9.5	10			
"		105	"	30	10	1	1st Experiment with
"		108	"	30	40	2	rubber jar also a
"		112		30	70	3	10¾" x 1½" anode chamber
6:31	1.225	112		15	85	3½	Cut maples

Anode Chamber 10¾" 1½"

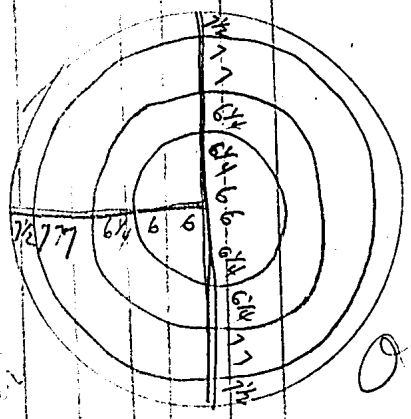
This is first disc with new Rubber jar.



Cp

Epper #27

Time	Spkr	Temp	Volts	Amp	Total	Hrs	Remarks
4:30	1225	120	9.5	10			Duplicate of # 26 Epper
5:30	"	"	"	30	10	1	
6:30	"	"	"	30	40	2	
7:30	"		"	30	70	3	
8-	"		"	15	85	3½	Out

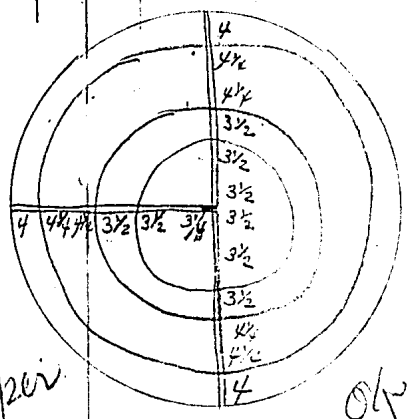


Caliper

OK

Epper #28

							Remarks
4:30	1225	125	9.5	10			Dup of Epper #26
5:30	"	120	"	45	10	1	Except at 1 hr at 10 Amp
6:30	"	130	"	45	55	2	then boost to 45 Amp
				Out			for 1 hour and take off

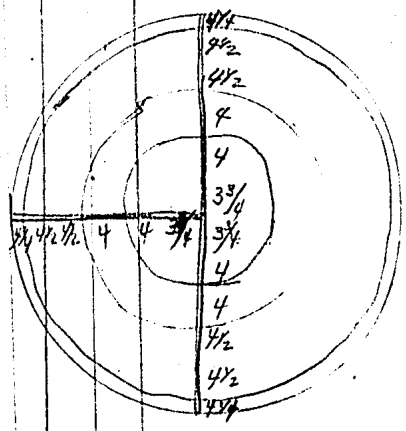


Caliper

OK

Expser #29

Time	Expser	Temp	Volt	Amps	Total	Hrs	Remarks
9.40	122.5	100	8.5	10.			Duplicate of
1040	"	"	12.	45	10.	1	Expser #28
1140	"	105	"	45	55	2	Run 2 hrs
							one hr. at 10
							one " " 45

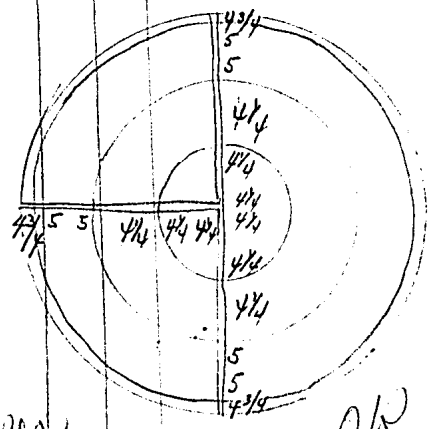


Calipser

OK.

Expser #30

	Expser	Temp	Volt	Amps	Total	Hrs.	Remarks
	122.5	120	10.	10.			1 hr at 10 Amps then
	"	125	131	60	10	1	1 " " 60 " + 10 trips
	"	135	"	60	70	2	Out



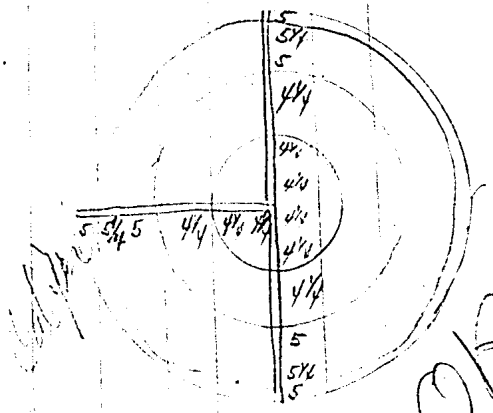
Calipser

OK

Exper#31

Time	Sp. Gr.	Amp.	Volt	Amp.	Total	Hrs
230	1225	135	10	10		
330	"			60	10	1
430	"			60	70	2

Remarks
1 hrs. at 10 Amps
1 " " 60 " Thus
strips
This is a dupe of Exper#30



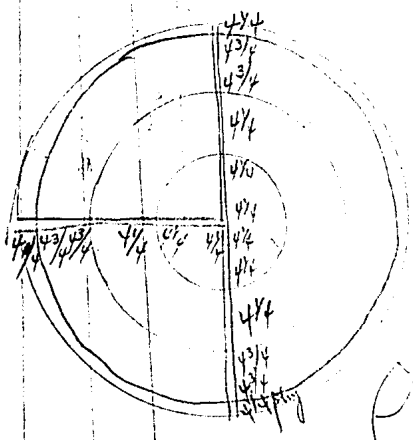
OR

Feb. 4, 21.

Exper#32

Time	Sp. Gr.	Amp.	Volt	Amp.	Total	Hrs
0	1225	100	8.5	10		
1	"	108	12	60	10	1
2	"	120	12	60	70	2

Remarks
Out
Raised crack so anode is 2" from cathodes, and it plating is faster, also cuts down resistance of bath sol.



OR

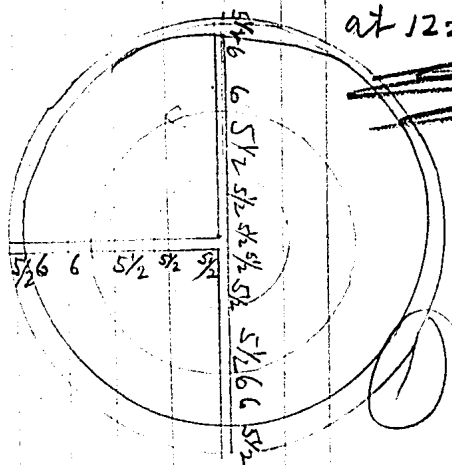
Feb 5, 21 — Exper # 33

Time	Sp. Gr.	Temp	Volt	Amp	Total	Hrs
215	1225	120	8.	10		
315	"	125	12	60	10	1
415	"	135	12	60	70	2
515	"	"	12	60	130	3

Duplicate of #3 Exper Except for 3 hours Out.

Extra hour went to supper should of been taken out at 2 hrs.

Excess Acetic Ac by smell best work also temp above 11 at 1225 Sp. Gr.



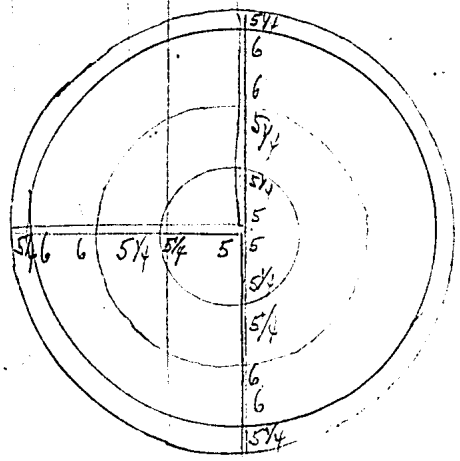
OK

Feb 5, 21. — Exper # 34

Time	Sp. Gr.	Temp	Volt	Amp	Total	Hours
11	1280	115	9.	10		
11	"	120	10.	60	10	1
12	"	125	10	60	70	2

Remarks anode 1½" from cathode see how close to be safe we can come to anode.

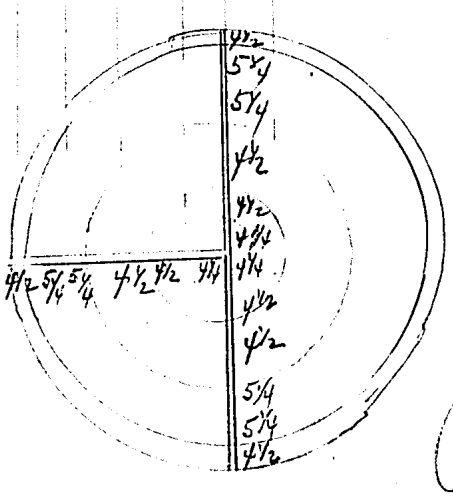
Temp Max 140 } OK
" Min 120 }
gives best Results.



Feb 7, 21.

Epper #35

Time	Sp Gr	Temp	Volt	Amp	Total	Hrs	Remarks
1215	1230	120	9	10			Duplicate of #34
115	"	125	10	60	10	1	Epper
215	"	130	10.	60	70	2	Cutt.



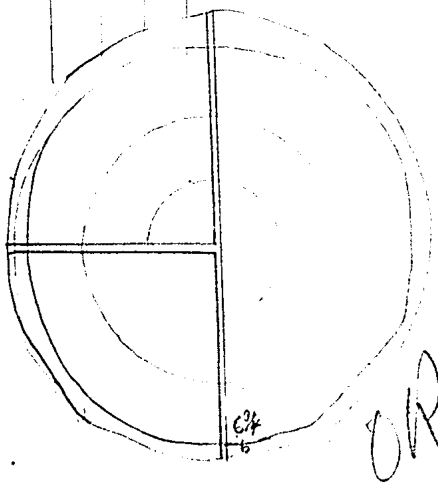
OR

Feb 7, 21

Epper #36

Time	Sp Gr	Temp	Volt	Amp	Total	Hrs	Remarks
10	1230	100	6	10			Dup. of Epper #34
50	"	105	12	60	10	1	to see if any bug
30	"	125	12	60	70	2	develops.

ran 15 minutes over 2 hrs was not in to take disc out



OR

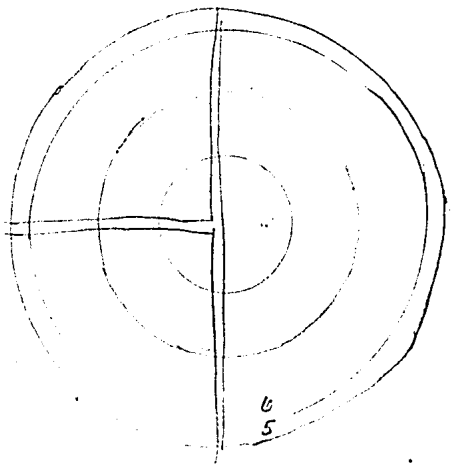
Feb 7, 21

Expert #37

Time	Spkr	Temp	Volt	amps	Total	Hrs
350	1230	120	9	10		
450	"	125	12	60	10	1
550	"	"	12	60	70	2

Remarks
Slip of Expert #3
to see if anything
develop

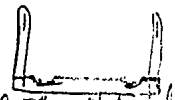
OK



Expert #38

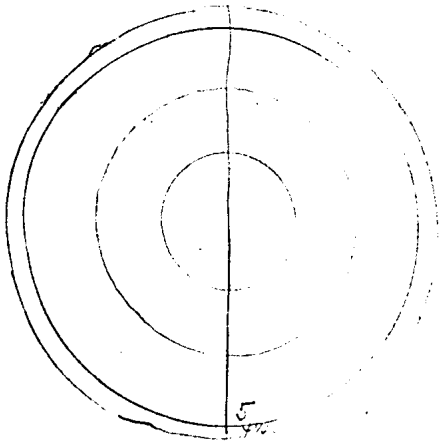
	Spkr	Temp	Volt	amps	Total	Hrs.
	1230	120	12	10		
	"	125	11	60	10	1
	"	130	11	60	70	2

Remarks
1½" from cathode to
anode + took out
baffle which was to
flip the swirl,



Baffle → notch in hub
disc was pointing

Looks very good O.K.



Epper #39

Time	Sp. Gr	Temp	Volt	Amps	Total	Hrs	Remarks
9:30	1230	125	11	10			
10:30	"	130	11	60	10	1	Duplicate of #38
11:30	"	135	11	6	70	2	no swirl bracket 1½" from anode to cathode

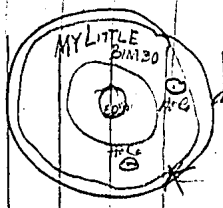
OK

Looks very good

5½/1000 at other end

Epper #40

Time	Sp. Gr	Temp	Volt	Amps	Total	Hrs	Remarks
10:30	1230	100	9	20			1½" from anode, not baffle, run 1 hour and strip at 20 Amps look for pinholes
11:30	"	108	9	20	20	1	



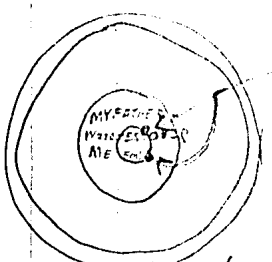
2 hole in this disc at muscle, Caliper 1¼/1000 thick

10:30	1230	108	9	20			
11:30	"	"	9	20	20	1	

Epper #41

Duplicate of Epper #40

Two holes at label



1¼/1000 Caliper

Exper #42

Time	Sp Gr	Temp	Volt	Amp	Total	Hrs.	Remarks
135	1230	110	9	10			1½" from anode,
235	"	"	"	10	10	1	No baffle
							Run 10 amps 1 hr and strip, look for pin holes.
							M. G

Exper #43

Time	Sp Gr	Temp	Volt	Amp	Total	Hrs.	Remarks
6	1230	110	9	10			Duplicate of #42
7	"	"	"	10	10	1	Exper.
							MG Showed pinholes

Feb. 10, 20

Exper #44

Time	Sp Gr	Temp	Volt	Amps	Total	Hrs	Remarks.
8	1230	110	9	30			1½" from anode
9	"	"	"	30	30	1	No baffle
							Run 30 amps 1 hr and strip, look for pin holes.

Exper #45

Time	Sp Gr	Temp	Volt	Amp	Total	Hrs	Remarks
8:30	1230	110	9	30			Duplicate of Exper #44
9:30	"	110	"	30	30	1	

Eppser #46

Feb 9 21

Time	Eppser	Temp	Volt	Amp	Total	Hrs	Remarks
4PM	1230	105	9.5	10			lanzonetta
5	"	110	12	60	10	1	Orlikhiby Spalding
6	"	"	11	60	60	2	#5052-A1
							1½" from anode
							No baffle to stop swirl
							10 Amps 1 hr
							60 " 1 "
							Transfer to
							copper plate Eppser #88 run 20
							amps ½ hr then rais
							to 75 amps for 10½ h
							strips + make 2 Pr
							Eppser #46
1130	1230	112	8.5	10			#50730
1230	"	115	10.5	60	10	1	number 7699A2 Title 769
130	"	120	"	60	70	2	Out
							This mould to be back
							up first plate Eppser
							Eppser #91 to pper
							then strips + put i
							lathe to trim and f
							then make 2 Pr

OK

OK

Feb. 10, 21.

Eppser #47

Time	Eppser	Temp	Volt	Amp	Total	Hrs	Remarks
	1230	110	9	10			
	"	115	10.5	60	10	1	Special Master to be mface then back up with copper
	"	120	"	60	70	2	Hard to make a working mould as for Mr Pullin to pulverize.

No good account of the shellaced label coming loose from Master,

This label stripped due to the solution cannot run above 90°F if label is shellac on.

Eppsr #48

Feb. 11, 21

Time	Gp.	Temp	Volts	Amp	Total	Hrs.	X	Remarks
3	1225	105	9	10	--	-		Making working
4	"	110		60	10	1		fast plating from
5	"			60	70	2		mould #3333B;
								Transfer to Eppsr
								Eppsr #90

OK

Eppsr #49

Feb. 13 21

Time	Gp.	Temp	Volts	Amp	Total	Hrs.	Remarks
12	1225	110	9	10			Making working
1	"	115	10.5	60	10	1	Mould from
2	"	120	"	60	70	2	3431
							To be mated up with
							#3333B, when
							backed up with
							Eppsr.
							Transferred to Eppsr
							#94 Eppsr back

OK

Feb. 15, 21 — Epper #50

Time	Spgr	Imp	Volt	Amp	Total	Hrs	Remarks
2	1225	120	5	10			To be backed up
3	"	125	10.	60	10	1	with copper Epper #97
4	"	"	"	60	70	2	

OK plate

Feb. 17, 21. — Epper #52

Time	Spgr	Imp	Volt	Amp	Total	Hrs	Remarks
1	1225	120	8.	10			To be backed up
2	"	125	10.	60	10	1	for Copper Epper #97
3	"	"	"	60	70	2	

OK Plate

Epper #51

Time	Spgr	Imp	Volt	Amp	Total	Hrs	Remarks
4	1225	125	8	10			To be backed up
5	"	125	9.5	60	10	1	with Copper Epper #97
6	"	"	"	60	70	2	

OK plate.

Time	Spgr	Imp	Volt	Amp	Total	Hrs	Remarks
4	1225	120	8	10			To be backed up for
5	"	125	10.	60	10	1	copper Epper #98
6.	"	"	10.	60	70.	2	in Epper #53.

OK plate

Feb. 21, 21.

Epper #54

Time	Sp. Gr.	Temp	Volt	Amp	Total	Hrs	Remarks
1	1225	120	8	10			To be backed
2	"	125	10	60	10	1	up with Epper #9
3	"	"	"	60	70	2	Copper. Run
							Duplicate of Epper #9
							Copper.

OK plate

Time	Sp. Gr.	Temp	Volt	Amp	Total	Hrs	Epper #55 Remarks
4	1225	120	8	10			
5	"	125	10	60	10	1	
6	"	"	"	60	70	2	

Feb. 25, 21

Mr Edison memo asking if the excess of acetic acid did away with the gas holes.

Answer yes

Clean first plate 6.5 to 6 cc acetic per liter 1240-1245 Sp. Gr at 120°F.

Cold plate requires more 2 cc per liter 225 Oscher. Bly

March 3, 21

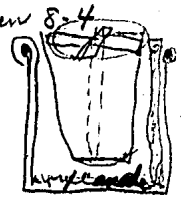
Epper 56

Time	Sp. Gr.	Temp	Volt	Amp	Total	Hrs.	Remarks
930	1230	120	10	10			Working female #5269A
930	"	"	"	60	10	1	1st plate of Easter
930	"	"	"	60	70	2	selection first plate
							out. to back up
							with Epper #106 Cu

							Epper #57
12	1230	10	10	10			
1	"	"	"	60	10	1	Working Female
2	"	"	"	60	70	2	# 4336 C-1
							2nd plated Easter selection
							to be backup with
							Epper # 107 Cu

							Epper #58
							Working female
							#5269 C1
							3rd plated Easter
							selection to be packed
							up with #108 Copper Epp

March 10, 21. Experiment #59

Time	Sp. Gr	Temp	Volt	Amps	Total	Hrs	Remarks
10 30	1225		9	2			Thin sheet copper
11			"	4	1		soldered into a cone
11 30			"	6	3	1	for use at purifying
12			"	8	6		graphite process
12 30			"	10	4	2	
1				12	15		This cone was cleaned
1 30				14	21	3	then 8-4
2				16	28		
2 30				18	36	4	
3				20	46		
3 30				24	58	5	
4				28	72		cone sticks up some
4 30				32	88	6	the crock 1½" also 1" for
5 00				40	96	6½	bottom of crock at anode,
6 00				40	136	7	also nickel anode
7				40	176	8	around inside of crock.
8				40	216	8	rotates 118 R.P.M.
9				40	256	9	
10				40	296	10	
11				40	336	11	
12				40	376	12	
1				40	416	13	716 Amps
2				40	456	14	Taken out to
3				41	496	15	take heads off
4				40	536	16	
5				40	576	17	
6				41	616	18	Cut and Put till ag
7				40	656	19	
8				40	696	20	
8 20				20	716	20½	Out

March 11, 21

Time	Sp. Gr	Temp	Volt	Amps	Total	Hrs	Remarks
1 PM	1225	90	9	6			
30		92		10	3	1	Second time
4		94		15	8	2	plated over
5		94		25	5	3	first coat
6		96		35	27	4	After all nuts
7				40	45	5	were filled
8				40	95	6	up
9				40	135	7	Put in
10				40	175	8	larger glass
11				40	215	9	cylinder
12				40	255	10	
1 AM March 12, 21				40	295	11	
2				40	335	12	
3				40	375	13	
4				40	415	14	
5				40	455	15	
6				40	495	16	
7				40	535	17	
8				40	575	18	
9				40	615	19	
10 AM				40	655	20	
11				40	695	21	
12				40	735	22	
1				40	775	23	

March, 18[illegible]

Exper. on Cone, Experiment #

Time	Sp.gr.	Temp	Volt	Amp.	Total	Hrs.	Remarks.
1 PM							
4:30	1227	80		5		12	Cone made of the
	Raised to			10		14	Cu. soldered in
							placed Jerrin
9AM	Monday	21		10			
	to Tues.	22		10		22	flash coat of Cu. to
9AM	Saturday			15		77	cover cool.
2PM	Tuesday	29		30		24	Had 2 shrs. [illegible]
							Tues 21st [illegible]

Experiment #

Time	Sp.gr.	Temp	Volt	Amp.	Total	Hrs.

[ITEM(S) FOUND IN BOOK]

Mr Epp Fast Plating
#1 to 58 Experiments

#5
Rotated 30 minutes with 60.C.C.
Rubber Cement from Combination
Rubber Co
on 4.30 P.M. off 5.00 P.M.

Rotating at 26 R.P.M.